

The Claims

What is claimed is:

1. A process for preparing cocoa or chocolate flavor precursor peptides comprising the steps of:
 - (i) preparing a cocoa nib powder from fermented cocoa beans;
 - (iii) extracting the cocoa nib powder with aqueous acetic acid;
 - (iii) separating non-proteinaceous compounds from the extraction with solid phase adsorption and collecting an elute containing peptides;
 - (iv) diluting the elute with trifluoroacetic acid;
 - (v) loading an elute fraction on a RP-HPLC column equilibrated with an acetate/triethylamine mixture and eluting the fraction with an increasing concentration of acetonitrile and trifluoroacetic acid; and
 - (vi) collecting the resulting elutes containing the peptides and recovering the peptides therefrom.
2. The process according to claim 1, wherein the peptides have a size of about 2 to 30 amino acids.
3. The process according to claim 1, wherein the peptides have a size of 2 to 5 amino acids.
4. The process according to claim 1, wherein the aqueous acetic acid used for the extraction has a concentration of 50 %.
5. The process according to claim 1, wherein the diluting is carried out with 0.1% trifluoroacetic acid..
6. The process according to claim 1, wherein the acetate/triethylamine mixture comprises 0.14 % sodium acetate and 0.05 % triethylamine.

7. The process according to claim 1, wherein the increasing concentration of acetonitrile and trifluoroacetic acid comprises 80 % acetonitrile and 0.1 % trifluoroacetic acid.
8. The process according to claim 1, which further comprises subjecting the peptides that are obtained to a Maillard reaction with reducing sugars to prepare the cocoa or chocolate flavor precursor peptides.
9. The process according to claim 8, which further comprises digesting the peptides that are obtained with proteases to prepare the cocoa or chocolate flavor precursor peptides.
10. Cocoa or chocolate flavor precursor peptides obtainable by the process of claim 1.
11. The peptides according to claim 10, having a size of about 2 to 30 amino acids.
12. The peptides according to claim 10, having a size of about 2 to 5 amino acids.
13. An edible product that includes one or more of the cocoa or chocolate flavor precursor peptides according to claim 10.
14. The edible product according to claim 13, in the form of a confectionery, ice cream, beverage, dairy product, cosmetic product, pet food or pharmaceutical product.
15. The edible product according to claim 14, wherein the confectionery product is chocolate.